UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

8439

7590

07/15/2009

ROBERT E. BUSHNELL & LAW FIRM 2029 K STREET NW SUITE 600 WASHINGTON, DC 20006-1004 EXAMINER
PAIK, SANG YEOP
ART UNIT PAPER NUMBER

3742 DATE MAILED: 07/15/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,211	04/17/2006	Young-Bog Rho	P57960	6921

TITLE OF INVENTION: AUTOMATIC CIRCULATION DEVICE OF WARM WATER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	10/15/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS; This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where ap in m

appropriate. All further indicated unless correct maintenance fee notifica	correspondence includir ed below or directed oth	ng the Patent, advance on nerwise in Block 1, by (a	rders and notification of n a) specifying a new corres	naintenance fees wi pondence address;	ill be mailed to the curren and/or (b) indicating a sep	t correspondence address as parate "FEE ADDRESS" for	
	DENCE ADDRESS (Note: Use Bl	ock 1 for any change of address)	Feet	c) Transmittal This	certificate cannot be used	for domestic mailings of the for any other accompanying ent or formal drawing, must	
2029 K STREE' SUITE 600	BUSHNELL & LA T NW	⁽⁷²⁰⁰⁹ W FIRM	I he	Cert reby certify that this	ificate of Mailing or Trans Fee(s) Transmittal is bein		
WASHINGTOR	N, DC 20006-1004					(Depositor's name)	
						(Signature)	
						(Date)	
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/576,211	04/17/2006		Young-Bog Rho		P57960	6921	
		LATION DEVICE OF W					
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE			
nonprovisional	YES	\$755 I	\$300 T	\$0 1	\$1055	10/15/2009	
EXAM		ART UNIT	CLASS-SUBCLASS				
PAIK, SA 1. Change of correspond	NG YEOP	3742	392-311000 2. For printing on the p				
CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			or agents OR, alternative (2) the name of a single registered attorney or a 2 registered patent attorned in the control of the	a single firm (having as a member a ey or agent) and the names of up to ent attorneys or agents. If no name is will be printed.			
PLEASE NOTE: Un recordation as set fort (A) NAME OF ASSI	less an assignee is ident th in 37 CFR 3.11. Comp GNEE	ified below, no assignee pletion of this form is NO	T a substitute for filing an (B) RESIDENCE: (CITY	atent. If an assigne assignment. and STATE OR Co	OUNTRY)	document has been filed for	
Please check the appropri	riate assignee category or	categories (will not be pr	rinted on the patent):	Individual 🖵 Co	rporation or other private gr	roup entity 🔲 Government	
4a. The following fee(s) are submitted: ☐ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies			 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) □ A check is enclosed. □ Payment by credit card. Form PTO-2038 is attached. □ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form). 				
5. Change in Entity Sta	atus (from status indicated as SMALL ENTITY statu	· · · · · · · · · · · · · · · · · · ·	☐ b. Applicant is no lone	per claiming SMAL	L ENTITY status. See 37 (FR 1 27(g)(2)	
NOTE: The Issue Fee an	nd Publication Fee (if requ		d from anyone other than t			the assignee or other party in	
				Date			
Typed or printed name					0		
This collection of inform an application. Confiden submitting the complete this form and/or suggest	nation is required by 37 C titality is governed by 35 d application form to the ions for reducing this bu Virginia 22313-1450. DO	CFR 1.311. The information U.S.C. 122 and 37 CFR will vary to the USPTO. Time will vary rden, should be sent to the	on is required to obtain or r 1.14. This collection is est of depending upon the indiv the Chief Information Office	etain a benefit by th imated to take 12 m idual case. Any con rr. U.S. Patent and 1	te public which is to file (ar ninutes to complete, includi nments on the amount of t Grademark Office, U.S. Der	and by the USPTO to process) ing gathering, preparing, and ime you require to complete partment of Commerce, P.O. for Patents, P.O. Box 1450,	

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FILING DATE FIRST NAMED INVENTOR		CONFIRMATION NO.	
10/576,211	04/17/2006	Young-Bog Rho	P57960	6921	
8439 75	90 07/15/2009		EXAMINER		
ROBERT E. BUS	SHNELL & LAW FI	PAIK, SAI	NG YEOP		
2029 K STREET N	IW		ART UNIT	PAPER NUMBER	
SUITE 600 WASHINGTON, I	OC 20006-1004		3742 DATE MAILED: 07/15/200	9	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 759 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 759 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

	Application No.	Applicant(s)			
	, ipplication its) (pp.:ou(o)			
Notice of Allowability	10/576,211	RHO ET AL.			
Notice of Allowability	Examiner	Art Unit			
	SANG Y. PAIK	3742			
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED or other appropriate comi IGHTS. This application is	in this application. If not include nunication will be mailed in due	ed course. THIS		
1. This communication is responsive to					
2. The allowed claim(s) is/are <u>1-12</u> .					
 3. Acknowledgment is made of a claim for foreign priority u a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 	e been received.	, ,,			
Copies of the certified copies of the priority do	cuments have been receiv	ed in this national stage applica	tion from the		
International Bureau (PCT Rule 17.2(a)).					
* Certified copies not received:					
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		ile a reply complying with the red	quirements		
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which giv			OTICE OF		
5. CORRECTED DRAWINGS (as "replacement sheets") must	st be submitted.				
(a) ☐ including changes required by the Notice of Draftspers	son's Patent Drawing Revi	ew (PTO-948) attached			
1) ☐ hereto or 2) ☐ to Paper No./Mail Date					
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date					
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the			back) of		
6. DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT			Note the		
Attachment(s) 1. ☑ Notice of References Cited (PTO-892)	5. ☐ Notice of	Informal Patent Application			
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)		Summary (PTO-413),			
	Paper No	o./Mail Date			
 Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>4/17/06</u> 	/. ∐ Examiner	's Amendment/Comment			
4. Examiner's Comment Regarding Requirement for Deposit of Biological Material		's Statement of Reasons for Allo	wance		
	9. 🔲 Other	<u>_</u> .			
/SANG Y PAIK/					
Primary Examiner, Art Unit 3742					

Application/Control Number: 10/576,211 Page 2

Art Unit: 3742

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: the prior art of record does not shows the claimed invention in combination with the recited feed valve and discharging valve that are automatically opened and closed by the vapor pressure in the boiler with the recited heat exchanging section along with the means of a circulation pipe connected to the water tank.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

- 2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Robinson, Jr (US 4,330,309), Harnish (US 4,498,622), Smith et al (US 3,365,567), Liebert (US 3,660,635), Brown (US 5,806,331), and DeBourg et al (US 5,881,207).
- 3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG Y. PAIK whose telephone number is (571) 272-4783. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/576,211 Page 3

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANG Y PAIK/ Primary Examiner, Art Unit 3742